

A1.2 BFAP COMPARTMENT 6a Phase 1 – Hickling, Horsey and Somerton

CONSULTEE	COMMENT	RESPONSE
British Dragonfly Society		
<i>General</i>	The British Dragonfly Society has no comments to make regarding these proposals.	Noted.
Broads Angling Liaison Committee		
<i>General</i>	... I can remember all the talk in the 60's about the need for maintaining the Broads in its then current state, with speed restrictions added as the river holiday traffic was at its peak. In those days the river was constantly being dredged/de-silted, many reed cutters made a living and a lot of the broads were wildlife havens and had no traffic allowed. Just look at what has happened to Bridge Broad in Wroxham, and they call that progress. I am very happy with what is being discussed, why cannot this have been done in years past when it would have been a lot cheaper? The effects of building along rivers was known to have an adverse effect on flooding in the 60's but all councils could see was more revenue for them to squander, with hardly a thought to the wildlife or surrounding environment. I do believe that this area should be maintained with adequate flood defences to preserve what is almost an unspoilt area of Norfolk.	Noted.
<i>Ecology</i>	I would be very interested to know when the survey was done for water voles etc.	Ecological surveys were undertaken in 2008 and 2009.
<i>General</i>	You have mentioned many users of this area but fail to mention the 1000's of artists who also contribute to the local economy; they only go there for its beauty.	Noted.
<i>Ecology</i>	One of my main concerns would be if this work would disrupt any of the breeding patterns for all forms of wildlife, including fish.	Surveys have been undertaken for a wide range of species that may be affected by the works. This information will be used to devise mitigation measures to minimise the impacts on wildlife. We are aware of the particularly sensitive nature of this part of the Project area including its importance for breeding and wintering birds.
Broads Authority		
<i>Recreation and Navigation</i>	As with other compartments we would expect to agree the detailed specifications for the proposed erosion protection works and any necessary channel marking in areas where such works are proposed. We would also ask if there is scope for using dredged material in any of the works proposed.	
<i>Recreation and Navigation</i>	As with other compartments we would expect to agree specifications for new piling.	Noted.
<i>Recreation and Navigation</i>	We welcome the proposal to re-pile the Somerton 24-hour mooring and would like confirmation that the whole length of the mooring will be re-piled.	We have subsequently met with the Broads Authority on site and confirmed that all of the 24-hour mooring will be re-piled.
<i>Recreation and Navigation</i>	At Horsey Staithe the proposal shown on the consultation map is to maintain the flood defence but no mention is made of the piling. We would therefore like confirmation of the long term proposals for the piling.	The piling will be retained for future maintenance by the Horsey Estate/National Trust. We have agreed to replace the topboards where required whilst on site.
<i>Recreation and Navigation</i>	We would appreciate early discussions on the likely proposals for the piling in Waxham Cut.	Replacement topboards will be installed where required.
<i>Recreation and Navigation</i>	We would welcome discussions with BESL/EA/NT/The Horsey Estate regarding the potential for angling enhancements in the area.	Noted. We would be happy to contribute to partnership projects along Somerton Dyke or Horsey Mere.
<i>Recreation and Navigation</i>	Public Footpath 1 Horsey Runs around the north east boundary of the broad and there has been a permissive alternative footpath operating in the area for some time in order to reduce disturbance to protected wildlife. We would support any proposal to provide a footpath below the crest of the bank along this section and would welcome discussion with BESL/NT/NCC regarding the potential to locate any such path as close as possible to the existing footpath with a view to establishing the definitive line on the lower path.	This issue has been discussed with interested parties and the design incorporates a path below the crest on the rear slope.
<i>Recreation and Navigation</i>	We would welcome discussions regarding the potential for temporary alternative routes for footpaths while site works are in progress	
<i>Environment</i>	We would welcome a site visit to discuss tree clearance.	Completed summer 2009
<i>Conservation</i>	The Broads Authority welcomes the provision of flood protection for the important designated sites in this Compartment that will result from the scheme.	Noted
Broads Hire Boat Federation		
<i>General</i>	The Broads Hire Boat Federation has no observations to make on the proposals.	Noted
Broads Society		
<i>General</i>	Two issues concerning this consultation have arisen as a result of our internal discussions, the first being our anxiety about the effects of BESL's proposals on the ecology of the flood defences to the north of Horsey Mere and the second regarding the future of the short length of quay heading at the top end of Meadow Dyke.	
<i>Construction</i>	We are also concerned about the lack of clarity in the consultation document regarding the exact location of the sections of bank that are to be provided with erosion protection. I think the first step will be to arrange a site meeting.	A site visit with the Broads Society was undertaken in September 2008. This included boat access to Meadow Dyke to look at the piling and discuss the proposals.
<i>Ecology/Landscape</i>	A short section of one of the flood banks which it is proposed to 'strengthen', namely that located immediately below the words Horsey CP on the map accompanying the consultation, is fairly heavily colonised by trees and bushes, and special care needs to be taken if unacceptable damage to the landscape and wildlife of this area is to be avoided.	We cleared this area in late summer 2009. Most of the material removed was grey willow and birch although some semi-mature oak also had to be cleared. A large number of oaks and some birch have been retained on the edge of the bank and the soke dyke edge.

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	<p>We were interested to see that the floodbank to the north of Hickling Broad which leads in an easterly direction from Hill Common is to be 'strengthened' and in one place 'set back'. Affording as it does splendid views over the Broad, we would very much hope that negotiations aimed at establishing a 'permissive' footpath along this section of the flood defences could be put in hand, preferably prior to work being carried out. Ideally, such a footpath would eventually continue eastwards, to end at or near Whiteslea Lodge. However, we are well aware that the Norfolk Wildlife Trust as owners of the Hickling Broad National Nature Reserve would have grave reservations about such a proposal on the grounds that it could jeopardise the steps it is taking to safeguard the wildlife interest of this site. In the circumstances, we would like to suggest that a permissive path should be established along the flood bank from Hill Common, but only as far as the wind-powered mill - now a look-out. From here, a permissive path could hopefully be negotiated along the track leading northwards to Willow Farm, where it would join up with an existing right of way leading back to Hill Common, thus forming a circular route to and from the latter.</p>	<p>We have raised this opportunity with the landowner but they are not prepared to provide a permissive route. The reason is that they already have a well-used right of way (road used as a public path) through their land and farmyard and that opening up the floodbank route would lead to an increase in disturbance to wildlife. They do, when asked in advance, generally allow people to walk the track from the farm to Hickling Broad Drainage Mill but would not want to formalise this arrangement.</p>
	<p>We look forward to receiving in due course BESL's proposals for the Phase 2 works in Compartment 6a. These could affect several ecologically sensitive areas, notably the Whiteslea Lodge area, the western side of the Brayden Marshes, and Heigham Holmes. Doubtless, BESL is currently having discussions with the owners and occupiers of these areas with a view to minimising the affect of their proposed works on environmental and navigational interests.</p>	<p>We expect to be able to consult on the Phase 2 works in spring 2010.</p>
Broads Society		
<p><i>Additional comments following site visit in Sept 2008</i></p>	<p>You show a length of piling to be carried out in Meadow Dyke near the N-E end; we think that this should read re-piled, but as discussed on the site inspection we do not think that there is any need for complete re-piling since this appears to be "composite" piling so that underwater the piles are in good order; therefore all that is needed is maintenance in the form of replacement of the horizontal top boards; for that we suggest the recycled plastic (of a suitable colour, e.g. dark brown or black) should be used. The present piling re-furnished would be more visually acceptable than steel piling, and better for casual mooring, as well as saving a great deal of expense.</p>	<p>The topboards will be replaced and maintained.</p>
	<p>In Waxham Cut, although the original documents did not show it, you are proposing removal of some piling, and we would object to that especially in the places which we discussed since some lengths are valuable casual moorings and again the piling is "composite" and only needs maintenance of the top boards. It is important to retain the casual (or informal) moorings in Waxham Cut since they are popular; the landowner may prefer that there were none but being tidal there is a public right to moor for limited periods and people using the moorings do not cause any more disturbance than people and dogs walking along the nearby footpath.</p>	<p>The piling will now be retained and the topboards replaced over a total of 150m</p>
	<p>Where any EP is carried out (except where well away from navigable water), it should not be gabions, and it should be marked until there is a good growth of vegetation.</p>	<p>We will use asphalt matting and reed for erosion protection. The detail will be shown on the planning drawings.</p>
	<p>On the piling, all capping, waling etc, should be in recycled plastic rather than timber; similarly if there is to be any crest piling, it should also have capping etc. in recycled plastic.</p>	
	<p>There should be no work on the site on Sundays or Public Holidays.</p>	<p>Works will be restricted to Monday to Friday and Saturday mornings. The programme will take account of the need to minimise disturbance to publicly accessible areas during the main holiday periods.</p>
	<p>Precautions should be taken to prevent the growth of trees and scrub where work is carried out on the floodbank.</p>	<p>The banks will be subject to annual cutting following the completion of works</p>
	<p>As in other compartments it would be a benefit if BESL could report any signs of American Mink.</p>	
Natural England		
<p><i>General</i></p>	<p>We were surprised that the new cross wall between Mr. Tallowin's arable land and the NWT Whiteslea block is not part of this consultation. We would support its inclusion.</p>	<p>This element of the works has now been completed following a separate planning application.</p>
<p><i>Access</i></p>	<p>We would like to see the strengthened bank north of Horsey Mere and part of Brayden Marsh incorporate a stepped profile so that walkers using the reopened footpath do not disturb wintering SPA populations.</p>	<p>This has been incorporated into the design.</p>
<p><i>Construction</i></p>	<p>Why has a 'strengthen and sheet pile' option been proposed against Meadow dyke. We would like to know why a 'retire the line' option was not proposed.</p>	<p>The setback option was looked at in detail with extensive ground investigation carried out in the marshes behind the existing bank. Unfortunately it was found that the soils in this area were very poor and would not provide sufficient material for a setback option to be carried out. The solution to re-pile or maintain the existing system is therefore the only feasible option.</p>
<p><i>Ecology</i></p>	<p>The timing of the works will be critical when working adjacent to Horsey Mere and Martham North Broad. This includes vegetation clearance planned for this winter which should be undertaken as early as possible.</p>	<p>We are working closely with the Horsey Estate and Norfolk Wildlife Trust to ensure that vegetation clearance is undertaken at appropriate times.</p>
<p><i>Construction</i></p>	<p>Was a proposed retired bank considered across Mere Farm linking the Mere Farm bank and the northern corner of Starch Grass? If it was why was it rejected?</p>	<p>This was considered but was rejected as the landowner wants to maintain the existing good habitat that has been developed in this area.</p>

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Norfolk County Council		
Access	For information I would point out that there is a public right of way along the crest of the existing flood bank around the north side of the Horsey Mere through to Brograve Mill, which is proposed for strengthening works. There have, in the past been, issues with the location of this public right of way, however the definitive line is on the crest of the flood bank. An alternative route is promoted across the nearby meadow (between TG452224 and TG 447226) but I would stress that this is NOT the definitive route.	We have subsequently met with the NCC Countryside Officer on site to discuss this issue. The design for this section of bank incorporates a low level footpath below the crest.
Norfolk County Council - Highways		
Access	I understand that it is your intention to unload tracked machines on the B1159 - Horsey Road to access site tracks. You should to contact my Streetworks Inspector to agree signage and timing for this.	We may have to off load large plant on the road and track across the marsh to the floodbank as we may not be able to get low loaders on and off the marshes. Access to West Somerton Staithe (and therefore the Horsey Road) was examined in great detail with the Highways Authority as part of the planning process for Compartment 7 (Thurne to West Somerton). We decided the best route was from the A149, using the B1152 through Martham and West Somerton rather than Sea Palling. I appreciate that the junction at the Lion Inn is not ideal but there no viable alternatives and oncoming traffic can see you better than you can seem them.
Norfolk Landscape Archaeology		
Archaeology	The proposed flood defence works lie in the valley of the River Thurne and the Hundred Stream where there is potential for previously unidentified archaeological remains to be present. The nature of the proposed works means that they have potential to impact on these remains.	
Archaeology	<p>If planning permission is granted by the Broads Authority, we would request that this be subject to a condition for a programme of archaeological work in accordance with Planning Policy Guidance 16, Archaeology and Planning (1990), para. 30. We would request the following condition: -</p> <p>No development shall take place within the site until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority. (DoE Circular 11/95, Appendix A, Para. 55)</p> <p>In this instance the programme of archaeological work will comprise occasional monitoring of ground works under archaeological supervision and control. NLA will provide a brief for the archaeology work on request.</p>	All site staff will be briefed on the potential to uncover buried remains. We will engage a professional archaeologist to undertake the monitoring
North Norfolk District Council		
Ecology	The majority of the land is designated under the Conservation (Natural Habitats and co.) Regulations 1994, therefore an appropriate assessment of the plan proposals may be required under Regulation 48.	Noted.
Norfolk Windmills Trust		
Archaeology	Horsey Mill TG45732215. The present mill was not built until 1912 on the foundations of the previous mill and incorporates some of the old machinery. The mill is listed grade 2.	
Archaeology	<p>Steam Mill Corner. There were two steam mills here. The first about TG44952185 has some remains in the dyke. I have visited the site with Mr Buxton and there are some vertical timber posts and some ironwork in the dyke. The remains of a turbine may well still exist below the water. There was also a mound on one side of the dyke which could just be a pile of earth or brick foundations.</p> <p>The second mill around TG45002190 is by a hide which Mr Buxton has built. There seems to be quite a lot of brick foundations along with the intake/outfall water lane, which were difficult to see due to the amount of vegetation. Not much seems to be known about these sites and I have not seen any photographs. Both Mills were built sometime between 1838 and the 1880's as they appear for the first time on the 1st Edition 6" map. Care will need to be taken at these two sites. If the site is to be cleared or disturbed a watching brief will be required and the site will need to be recorded.</p>	There will be no material sourcing or vegetation clearance at these specific locations. However, there is a section of bank that is being strengthened nearby so standard procedures will apply in terms of identifying their presence on the construction drawings.
Archaeology	Mill unknown around TG45602110 (I think). Due to map changes it is difficult to pinpoint this mill. Mr Buxton mentioned a mill site to me when we went to Steam Mill Corner, I am not sure if this is the same mill. This was an early mill which doesn't appear on the 1837-8 one inch map. Care will also need to be required in this area due to not knowing the exact location of the site.	The grid reference would place this on the west side of the Hundred Stream, just north of the Starch Grass. There are no proposed works on this side of the stream in Phase 1.

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<p><i>Archaeology</i></p>	<p>West Somerton TG446552021 and TG46432223. At these locations stood a steam engine house now demolished and a drainage mill listed grade 2. The windmill worked instead of the steam engine in favourable conditions to save on coal. The steam engine was a brick building with an Easton, Amos and Anderson engine using a Cornish boiler. By 1952 the turbine had been adapted and was driven by an electric motor.</p> <p>A windmill is recorded on Fayden's Map of the late 18th century but the present mill was not built until 1900 by Englands. Due to the difficulty in interpreting the maps it is not clear whether the present mill was built on the same site.</p> <p>I hope that where remains existed, and exist, more detailed investigation will take place and care will be taken when works are carried out in these locations. A watching brief maybe necessary. I hope that dykes patterns will be maintained where necessary.</p>	<p>There are no proposed works on the section of bank adjacent to the grade 2 mill (the solution for this section of bank is "maintain").</p> <p>It is proposed to strengthen the bank around the inlet where the steam engine used to be. We will engage a professional archaeologist during the works - any remains that are uncovered at this location will be recorded and documented, in agreement with officers from NWT and Norfolk Landscape Archaeology</p>
Open Spaces Society		
<p><i>General</i></p>	<p>From the aforementioned consultation documents, and, in particular, the maps of the proposed works, there would not appear to be any long-term impact on the public paths within the area, and on that basis I raise no objection to the proposed works.</p>	<p>Noted.</p>
Water Management Alliance (Broads IDB)		
<p><i>General</i></p>	<p>The IDB have a culvert under Horsey Boat Dyke (TG455222) that is ancient and is in the IDB capital replacement programme. It may be possible to include this in BESL works with funding from EA, any maintenance works will need to accommodate the culvert in some way.</p>	<p>Noted. We will accommodate these works if programme allows.</p>
<p><i>General</i></p>	<p>There is also a culvert under Waxham New Cut, but this is part of BESL future works and a similar approach may be possible.</p>	<p>Noted.</p>
<p><i>General</i></p>	<p>Some of the works affecting, or near, Board main drains will require Bylaw consent but this can be resolved at a design stage.</p>	<p>Noted.</p>
<p><i>General</i></p>	<p>I note the works from Waxham New Cut to the west of NWT reserve at Hickling are designated as future works. As you know we have two pumping stations, Eastfield and Stubb, at the end of long dykes. Has any thought been put into the possibility of relocating these stations to the ends of the dykes thus shortening the lengths of floodwalls by over 2.5km? We have recently replaced Stubb with a submersible pump that could be moved easily, but power would need to be extended. Obviously this would entail the present boat dykes becoming internal drains, and the levels may not be suitable. Perhaps we could look at the levels from your surveys at some time. I would guess that the cost of doing this (even with additional EA grant aid) would be more than the cost of maintaining existing floodwalls bearing in mind that leakage more than overtopping is the main problem on this frontage - apart from White Slea.</p>	<p>This option is still being considered. A decision will be made as part of the Phase 2 works.</p>
<p><i>General</i></p>	<p>I assume that BESL will be using the spoil from the IDB Willow Farm drainage scheme for bank strengthening?</p>	<p>This was subsequently used to construct the new cross wall on the western boundary of Hickling Nature Reserve.</p>
<p><i>General</i></p>	<p>The Broads Internal Drainage Board fully support the flood defence works in Broadland, particularly the Thurne area.</p>	<p>Noted.</p>
Resident		
<p><i>General</i></p>	<p>... [we] have a large frontage onto Hill Common. We are impressed with and very supportive of your plan for flood defences and delighted that work is to commence within the next few months. However, may I suggest that your engineer arrange a site visit to meet Hill Common residents in order to clarify one or two points of detail?</p>	<p>A meeting with the residents of Hill Common was held in summer 2008.</p>
Resident		
<p><i>General</i></p>	<p>I am supportive of this proposal to help defend our houses and land from flooding. I understand that access for boats/people/car parking to the boat houses will be maintained. This is a Site of Special Scientific Interest I understand all steps will be taken to protect wildlife and habitat.</p>	
<p><i>Environment</i></p>	<p>Concern over removal of trees along Hickling Wall on Tallowin's Farm. Trees are scarce in the area. They suck up water; reduce wind flow, shelter birds and animals. Can you provide assurances that necessary tree removal will be matched with set-back tree planting?</p>	<p>We will only remove what is absolutely necessary – the majority of trees on this section of bank will be retained.</p>
Resident		
<p><i>General</i></p>	<p>Thank you for your letter of 5 September 2008 and for your various site attendances at Hill Common since then. I am grateful to you for your invitation to view the computer model at the offices of Broadland Environmental Services Limited (BESL) and I would certainly need to view this to provide any further fully informed comment. ...</p>	<p>We have met the resident to discuss the observations and concerns raised and believe that he is now re-assured, particularly with respect to the impact on drainage.</p>
<p><i>General</i></p>	<p>I am broadly in support of any flood alleviation works which are going to achieve a true hydrological abatement of a perceived 1 in 200 year flood event without exacerbating existing surface and ground water drainage difficulties in the Hickling Broad catchment area.</p>	
<p><i>General</i></p>	<p>I note that you have an "in house" hydrological model on your computer and employ an "in house" qualified hydrologist who I understand is on maternity leave. I would question whether the hydrological expertise currently engaged by BESL is sufficiently adequate.</p>	
<p><i>General</i></p>	<p>I note that you have not apparently carried out a detailed hydrological survey of the area in which you intend to work but rely instead on historic surveys and local knowledge. I would question whether the computer model is flawed as a result.</p>	

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<i>General</i>	With BESL having no retained firm of consulting hydrological engineers to advise I would question what insurance cover is in place to cover the in house hydrological advice in the event that the measures fail, properties flood and BESL goes into liquidation.	
<i>General</i>	In the absence of sufficient hydrological expertise from BESL I have been obliged to accept the local knowledge and assurances of some of my neighbours to satisfy my own personal concerns and those I hold for the wider community in Hickling in respect of localised surface water saturation and flooding caused by the plastic piles interfering with the natural water table and the ability of surface and ground water to drain into the natural clay basin of Hickling Broad from the surrounding catchment area however wide that may be.	
<i>General</i>	You will be pleased to learn that I am not going to raise any objection to your proposed works but this does not infer that I consent to any additional imposition of surface water saturation or flooding to my property caused by the works and, in reaching this conclusion, I am relying extensively on the information provided by BESL on behalf of the Environment Agency backed up by the specialist local knowledge of some of my neighbours who have contacted me directly after speaking with you and assured me personally that I have nothing to worry about.	
<i>Construction</i>	I understand that, for the section in front of my home, you intend to raise the height of the road surface to retain the existing drainage of surface water into the broad. I would request that this section of new road surface is finished in concrete or tar macadam so as to avoid the current regular erosion by traffic. To this end, I would consider making a contribution to the additional cost of the better quality surface and I hope we can reach a mutually acceptable agreement.	
<i>Environment</i>	Whilst not raising any objections I would make the following constructive observations: The full extent of the area of the impervious clay basin of the Hickling Broad catchment area likely to be affected by the plastic piling has not apparently been established and therefore the full extent of the class of persons likely to be affected by surface water saturation and flooding if the measures fail is not known.	
<i>General</i>	There do not appear to be any proposals for dilapidation surveys showing average summer and winter ground water tables within the individual properties across the Hickling Broad catchment area before the works commence from which property owners and BESL can measure any pronounced future changes.	
<i>General</i>	The proposals do not appear to have the recommendation of an independent hydrological report prepared by an established firm of consulting hydrological engineers backed with professional insurance.	
<i>Construction</i>	No allowance appears to have been made for surface and ground water collecting behind the flood barrier and backing up into the wider Hickling area and there is too much reliance on the maintenance of a private secondary drainage system.	
<i>Construction</i>	There are no proposals for a secondary drainage system (extensively used elsewhere) or for a proper adopted link to the drainage system maintained by the Internal Drainage Board.	
<i>General</i>	Local knowledge is only one element of a detailed hydrological assessment recent history in other parts of the country has demonstrated that many flooding events far exceed local knowledge or historic records.	
<i>Construction</i>	The proposed barrier will affect the legal rights of the landowners over which it passes and any additional demand on private water courses may affect the riparian rights of the landowners involved. A land drainage agreement for the future maintenance of the private element of the secondary drainage system would seem to be desirable if not essential.	
<i>General</i>	I understand that people in this area have waited a long time for these measures to be put in place and I am not surprised that they are keen to see the work carried out as soon as possible. I hope that I am completely wrong and that surface and ground water will not become trapped on the land side of the plastic pile barrier and saturate and flood land occupied by the wider community. I hope that the private and public drainage systems will cope with the additional demand and that the combination of increased ground water, trapped surface water and flood plain water from the marshes and elsewhere will not overcome the existing secondary drainage systems and flood Hickling from behind or within because at that stage it will be of little comfort to me and of little value to the community to say I told you so.	